



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/713,614

11/14/2003

Robert J. Nolan

0011388.00274

2513

21878 7590 05/17/2007
KENNEDY COVINGTON LOBDELL & HICKMAN, LLP
214 N. TRYON STREET
HEARST TOWER, 47TH FLOOR
CHARLOTTE, NC 28202

EXAMINER

TALBOT, BRIAN K

ART UNIT

PAPER NUMBER

1762

MAIL DATE

DELIVERY MODE

05/17/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/713,614

Applicant(s)

NOLAN ET AL.

Examiner

Brian K. Talbot

Art Unit

1762

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 March 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-55 is/are pending in the application.
- 4a) Of the above claim(s) 43-55 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-42 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 05 March 2007 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Art Unit: 1762

1. The request for reconsideration filed 3/5/07 has been considered and entered.

Claims 1-55 remain in the application with claims 43-55 being directed toward a withdrawn invention. Hence, claims 1-42 remain in the application.

2. In light of the submission of supplemental drawings, the objection to the drawings has been withdrawn.

3. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claim Rejections - 35 USC § 103

4. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Art Unit: 1762

5. Claims 1-7,9-11,13,19-22,24,26-28 and 30-35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dupont '705 in combination with Nolan et al. (4,804,886) or Nolan (4,507,332).

Dupont et al. (U.S. Patent Application 2002/0187705, hereafter) teaches a method of coating a fluorescent light tube (10) having opposing end caps with electrically conductive pins (18) extending from at least one of the end caps, the method comprising the steps:

- a) loading the fluorescent light tube on a coating conveyor system [0022];
- b) feeding the fluorescent light tube to a coating station, which includes a coating machine [0021];
- c) applying a coating to the fluorescent light tube with the electrically conductive pins uncovered (Fig. 2) at the coating station [0020]; and
- d) conveying said fluorescent light tube to a stacking and/or packaging station [0022].

Claim 2: Excess coating is removed from the ends of the article ([0026]; also compare Figs. 2 and 3).

Claims 3-5, 19-21: A plurality of articles is loaded to form a chain of articles with gaps therebetween, and the coating is applied to the chain and gaps to connect the sequentially coated light tubes. Each article is separated after the coating step (Fig. 2; [0026]).

Claims 6, 11: The coated bulb is cooled below the softening point of the thermoplastic material [0006].

Claims 7, 13: A vacuum is applied during the coating process [0021].

Art Unit: 1762

Claim 9: The coating step extrudes a molten thermoplastic material [0021].

Claims 10: The fluorescent tubes (10) are conveyed sequentially in longitudinal alignment with one another (Figs. 1, 2, 8). The coating extrudes molten thermoplastic material around each tube substantially in direct intimate contact with the tube [0021].

Claims 22, 36: The coated tubes are taken up by rolls to draw them away from the extruder. The coating thins, indicating that the leading lamp must be accelerated away from the trailing lamp [0022].

Claims 24-28: One of ordinary skill in the art would have understood that a process of the complexity that requires the coordination of simultaneously performing the large number of operations of '705 would have been controlled by a computer (i.e., automatically).

Claims 30-32: The thickness of the coating may be about 16 mil [0027].

Dupont '705 fails to teach directly coating the end caps as well as the tubes by not covering the end caps with any element intervening the coating and the end caps.

Nolan et al. (4,804,886) or Nolan (4,507,332) both teach applying a safety coating to the fluorescent lamp and a portion of the end caps (abstract).

Therefore it would have been obvious for one skilled in the art at the time the invention was made to have modified Dupont '705 process by coating a portion of the end caps as evidenced by either Nolan et al. (4,804,886) or Nolan (4,507,332) with the expectation of achieving similar success, i.e. prevention of the glass shards from a breakage of the glass.

Art Unit: 1762

Dupont '705 in combination with Nolan et al. (4,804,886) or Nolan (4,507,332) is discussed above. It is the examiner's position that one of ordinary skill in the art would have understood that a process of the complexity that requires the coordination of simultaneously performing the large number of operations of Dupont '705 in combination with Nolan et al. (4,804,886) or Nolan (4,507,332) would have been controlled by a computer (i.e., automatically), but Dupont '705 in combination with Nolan et al. (4,804,886) or Nolan (4,507,332) does not explicitly so state. However, it has long been held that automating a manual activity is not sufficient to distinguish over the prior art (MPEP 2144.04.III).

Claims 33-35: Dupont '705 in combination with Nolan et al. (4,804,886) or Nolan (4,507,332) is silent as to the distance between end caps of sequential tubes. However, this distance would have been recognized as a result-effective variable because the amount of space between tubes affects the total amount of space required for the apparatus and the amount of excess polymer coating between tubes that is discarded, and the amount of safe room for the cutting process to separate the tubes. It has been held that the discovery of the optimum value of a result effective variable in a known process is ordinarily within the skill in the art. *In re Boesch and Slaney*, 205 USPQ 215 (CCPA 1980).

Claims 6, 11, 15-18, and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dupont '705 in combination with Nolan et al. (4,804,886) or Nolan (4,507,332), as applied to claim 1, and further in view of Weingarten (U.S. Patent 3,706,216, hereafter '216).

Art Unit: 1762

Dupont '705 in combination with Nolan et al. (4,804,886) or Nolan (4,507,332) is discussed above. The lamp must inherently be impelled to bring it to the extruder. Dupont '705 in combination with Nolan et al. (4,804,886) or Nolan (4,507,332) does not explicitly teach that the lamp is impelled after cooling. However, '216 teaches that in extrusion processes, the extrusion coated articles may be impelled for further processing after being forcibly cooled (col. 4, line 56-col. 5, line 5), such as cutting. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have impelled the lamps of '705 after the desired cooling step for further processing such as cutting with a reasonable expectation of success because '216 teaches that such is a suitable order of operations for cooling and separating extrusion-coated lengths of material. The selection of something based on its known suitability for its intended use has been held to support a *prima facie* case of obviousness. *Sinclair & Carroll Co. v. Interchemical Corp.*, 325 U.S. 327, 65 USPQ 297 (1945).

Claim 16-18: As discussed above, '216 teaches that cooling with a water bath or with air are operative methods of cooling an extrusion coated substrate. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have accomplished the cooling of Dupont '705 in combination with Nolan et al. (4,804,886) or Nolan (4,507,332) using a water bath or air with a reasonable expectation of success because '216 teaches that they are suitable methods of cooling extrusion coated substrates.

Art Unit: 1762

Claims 8, 12, 14, and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dupont '705 in combination with Nolan et al. (4,804,886) or Nolan (4,507,332), as applied to claim 1, and further in view of Sica (U.S. Patent 6,043,600, hereafter '600).

Dupont '705 in combination with Nolan et al. (4,804,886) or Nolan (4,507,332) is discussed above, but does not explicitly teach heating the end caps before loading or conveying the tube. Dupont '705 in combination with Nolan et al. (4,804,886) or Nolan (4,507,332) does not explicitly describe the process of attaching the end caps to the tube. However, the Examiner takes Official Notice that it is notoriously well known to attach the end caps to the fluorescent tube by surrounding them with a sleeve and heating. See, e.g., '600, col. 2, lines 29-39. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have attached the end caps to the tube of Dupont '705 in combination with Nolan et al. (4,804,886) or Nolan (4,507,332) by heating because such is known in the art that such is a suitable method of assembling the end caps and fluorescent tube.

Claim 14: Dupont '705 in combination with Nolan et al. (4,804,886) or Nolan (4,507,332) teach infrared heat is suitable to heat end caps [0024].

Claim 25: It is the examiner's position that one of ordinary skill in the art would have understood that a process of the complexity that requires the coordination of simultaneously performing the large number of operations of Dupont '705 in combination with Nolan et al. (4,804,886) or Nolan (4,507,332) would have been controlled by a computer (i.e., automatically), but Dupont '705 in combination with Nolan et al. (4,804,886) or Nolan (4,507,332) does not explicitly so state. However, it

Art Unit: 1762

has long been held that automating a manual activity is not sufficient to distinguish over the prior art (MPEP 2144.04.III).

Claims 23 and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dupont '705 in combination with Nolan et al. (4,804,886) or Nolan (4,507,332), as applied to claim 1, and further in view of Duzyk et al. (U.S. Patent 5,532,549, hereafter '549).

Dupont '705 in combination with Nolan et al. (4,804,886) or Nolan (4,507,332) is discussed above. Excess coating is removed from the end caps of the lamps ([0026]; also compare Figs. 2 and 3). Dupont '705 in combination with Nolan et al. (4,804,886) or Nolan (4,507,332) does not explicitly teach labeling the tubes. However, the examiner takes Official Notice that it is notoriously well known to label fluorescent lamps to provide useful information. See, e.g., '549, col. 9, lines 1-5. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have labeled the lamp of Dupont '705 in combination with Nolan et al. (4,804,886) or Nolan (4,507,332) with a reasonable expectation of success in order to have provided information to the consumer.

It is the examiner's position that one of ordinary skill in the art would have understood that a process of the complexity that requires the coordination of simultaneously performing the large number of operations of Dupont '705 in combination with Nolan et al. (4,804,886) or Nolan (4,507,332) would have been controlled by a computer (i.e., automatically), but Dupont '705 in combination with Nolan et al. (4,804,886) or Nolan (4,507,332) does not explicitly so state. However, it

Art Unit: 1762

has long been held that automating a manual activity is not sufficient to distinguish over the prior art (MPEP 2144.04.III).

Claim 37 is rejected under 35 U.S.C. 103(a) as being unpatentable over Dupont '705 in combination with Nolan et al. (4,804,886) or Nolan (4,507,332), as applied to claim 1, and further in view of Payne (WO02/16049, hereafter '049).

Dupont '705 in combination with Nolan et al. (4,804,886) or Nolan (4,507,332) is discussed above. It does not explicitly teach the rate at which the lamps are conveyed. '049 teaches that a suitable rate for linking together fluorescent lamp tubes with an extrudable coating is about 6-49 ft./min. (p. 8, lines 4-9). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have used such a rate with a reasonable expectation of success because '049 teaches that it is a suitable rate for linking together fluorescent lamp tubes with an extrudable coating.

Claims 38-41 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dupont '705 in combination with Nolan et al. (4,804,886) or Nolan (4,507,332), as applied to claim 1, and further in view of Weingarten '216, as applied to claim 6 and Sica '600, as applied to claim 8. See also the further discussion of claims 3, 6, 7, 10, 22, and 24 above.

Claim 42 is rejected under 35 U.S.C. 103(a) as being unpatentable over Dupont '325 in view of Weingarten '216 and Sica '600, as applied to claim 38, and further in view of Duzyk '549 for substantially the same reasons given regarding claim 23.

Response to Arguments

6. Applicant's arguments with respect to claims 1-42 have been considered but have not been found persuasive.

Applicant argued that Dupont '705 failed to teach coating the end caps without any interfering element between the coating and the end caps and that Nolan et al. (4,804,886) or Nolan (4,507,332) only teach leaving the end caps partially uncovered.

While the Examiner acknowledges this fact, the claims as written require "the end caps to be uncovered". It is the Examiner's position that the Nolan et al. (4,804,886) or Nolan (4,507,332) references clearly teach this limitation as noted by Applicant and detailed in the references, Nolan et al. (4,804,886) or Nolan (4,507,332) teach partially covering, i.e. leaving portions of the end cap partially uncovered.

It appears Applicant is arguing that the "degree of uncoveredness" is differentiating, however, the claims do not encompass this limitation and are not commensurate in scope with the arguments.

Applicant argues Nolan et al. (4,804,886) or Nolan (4,507,332) teaches away from the invention with respect to heating the light tube to fuse the coating thereon and this is disadvantageous.

The Examiner disagrees. First off, the claims are not commensurate in scope with this argument. The claims are not limited to avoiding heating the light tube for applying the coating thereon. Secondly, Nolan et al. (4,804,886) or Nolan (4,507,332) are relied

Art Unit: 1762

upon for teaching the coating or lack thereof on the end caps and not for the specific coating process as this is detailed in the primary reference to Dupont '705.

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period; then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian K. Talbot whose telephone number is (571) 272-1428. The examiner can normally be reached on Monday-Friday 6AM-3PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy H. Meeks can be reached on (571) 272-1423. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 1762

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

BKTalbot 5/14/07

Brian K Talbot
Primary Examiner
Art Unit 1762

BKT